FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Graduate Programs

UGPC Approval _____
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner _____
Catalog _____

Department CEECS

College Engineering and Computer Science

***Current* Course Prefix and Number**	***Current* Course Title**
EEE 5502	Digital Processing of Signals

*Syllabus must be attached for **ANY** changes to current course details. See Guidelines. Please consult and list departments that may be affected by the changes; attach documentation.*

Change title to:

Change prefix

From: **To:**

Change course number

From: **To:**

Change credits*

From: **To:**

Change grading

From: **To:**

Academic Service Learning (ASL) **

Add ☐ **Remove** ☐

* Review Provost Memorandum
** Academic Service Learning statement must be indicated in syllabus and approval attached to this form.

Change description to:

Change prerequisites/minimum grades to:

Graduate standing for CEECS students, and instructor's approval for students from other major.

Change corequisites to:

Change registration controls to:

Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade.

Effective Term/Year for Changes:	**Terminate course? Effective Term/Year for Termination:**
Spring 2021	

Faculty Contact/Email/Phone Hanqi Zhuang/zuang@fau.edu/ 297-3413

Approved by		***Date***
Department Chair	Hanqi Zhuang Digitally signed by Hanqi Zhuang Date: 2020.10.21 15:50:37 -04'00'	
College Curriculum Chair	Francisco Presuel-Moreno Digitally signed by Francisco Presuel-Moreno DN: cn=Francisco Presuel-Moreno, o=Florida Atlantic University, ou=Ocean and Mechanical Engineering, email=fpresuel@fau.edu, c=US Date: 2020.10.22 11:58:25 -04'00'	
College Dean	MCardei Digitally signed by Mihaela Cardei DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou, email=mcardei@fau.edu, c=US Date: 2020.10.25 19:50:29 -04'00'	10/25/2020
UGPC Chair		
UGC Chair		
Graduate College Dean		
UFS President		
Provost		

Email this form and syllabus to UGPC@fau.edu 10 days before the UGPC meeting.

Department of Computer and Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus

1. Course title/number, number of credit hours	
Digital Processing of Signals – **EEE5502**	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites: Graduate standing for CEECS students, and instructor's approval for students from other major.	
3. Course logistics	
Term: . *Class location and time*:	
4. Instructor contact information	
Instructor's name *Office address* *Office Hours* *Contact telephone number* *Email address*	
5. TA contact information	
TA's name *Office address* *Office Hours* *Contact telephone number* *Email address*	
6. Course description	
An analysis of discrete signals and systems, difference calculus, sampling theory, Z-transform and the discrete Fourier transform, digital filter synthesis and implementation, and fast Fourier transform algorithms.	
7. Course objectives/student learning outcomes/program outcomes	
Course objectives	To provide students with the fundamental theory and up-to-date information in digital signal processing. This course is based on fundamentals covered in the Analysis of Linear Systems (EEL 4656) and and should be followed with advanced level DSP courses. In this course students are expected to code in MATLAB at a level where they can use programming to verify and demonstrate algorithms used in signal processing. Students needing a refresher in DSP may consult sites such as http://www.dspguide.com/ .
Student learning outcomes & relationship to ABET a-k objectives	1. The student will be able to understand the basics of signal processing: filtering, spectrograms, statistical estimation. (a,e,k) 2. The student will develop computer programming skills for data processing. (a,e,k) 3. The student will learn how to match signal processing techniques with the type of signal and the kind of information sought from the signal. (a, b, c, e, f, h, i, j, k)

	5. The student will be able to effectively communicate by writing 3 reports. (g)

8. Course evaluation method

A midterm exam, 3 assignments and a final exam given in-class in the open-book format. The final exam will test your understanding of the subjects at a theoretical level and will relate to the assignments, as well. The final exam will be on Tuesday May 2, 16:00-18:30. Each assessment is worth 20 %.	*Note*: The minimum grade required to pass the course is C.

9. Course grading scale

Grading Scale:
90 and above: "A", 87-89: "A-", 83-86: "B+", 80-82: "B", 77-79 : "B-", 73-76: "C+", 70-72: "C", 67-69: "C-", 63-66: "D+", 60-62: "D", 51-59: "D-", 50 and below: "F."

10. Policy on makeup tests, late work, and incompletes

Makeup tests: N/A
Late work is not acceptable.

Incomplete grades are against the policy of the Department. Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.

11. Special course requirements

MATLAB programming skills.

12. Classroom etiquette policy

University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.

13. Attendance policy statement

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

14. Disability policy statement

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's

campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/

15. Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to http://www.fau.edu/counseling/

16. Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

17. Required texts/reading

Discrete-Time Signal Processing by A. V. Oppenheim, R. W. Schafer, Prentice Hall.
ISBN-10: 0131988425, ISBN-13: 9780131988422

18. Supplementary/recommended readings

Instructor's notes which will be provided on Blackboard.

19. Course topical outline, including dates for exams/quizzes, papers, completion of reading

Topics:

1. Linear Discrete time systems: input/output relationships
2. The z-transform, the discrete time Fourier transform, sampling theorem
3. Filters and filtering, selective frequency operations.
4. Filter design techniques
5. Random signals and spectral estimation
6. Non-stationary signals, short-time Fourier transforms and spectrograms
7. Multirate systems
8. modeling

Assignment # 1:
Assignment # 2:
Midterm exam:
Assignment # 3:
The final exam